

# On hold – Halton TRB – Conical diffuser

## Overview

- Horizontal or vertical air supply
- Suitable for both heating and cooling applications
- Supply air jet velocity is effectively reduced due to high mixing effect
- Installation flush to the ceiling, or exposed (especially in high spaces)
- Adjustable throw pattern and pressure drop
- Circular duct connection; gasket in sizes 100 ... 400
- Openable cone module enables cleaning of the diffuser and ductwork.

## Accessories

- Plenum options with measurement and adjustment functions

## Quick selection

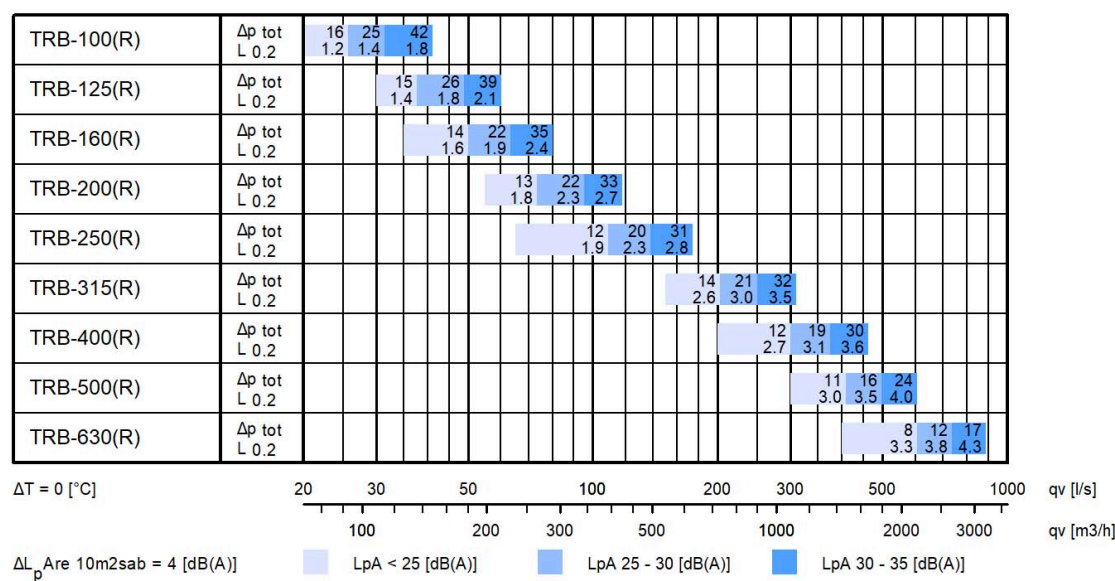
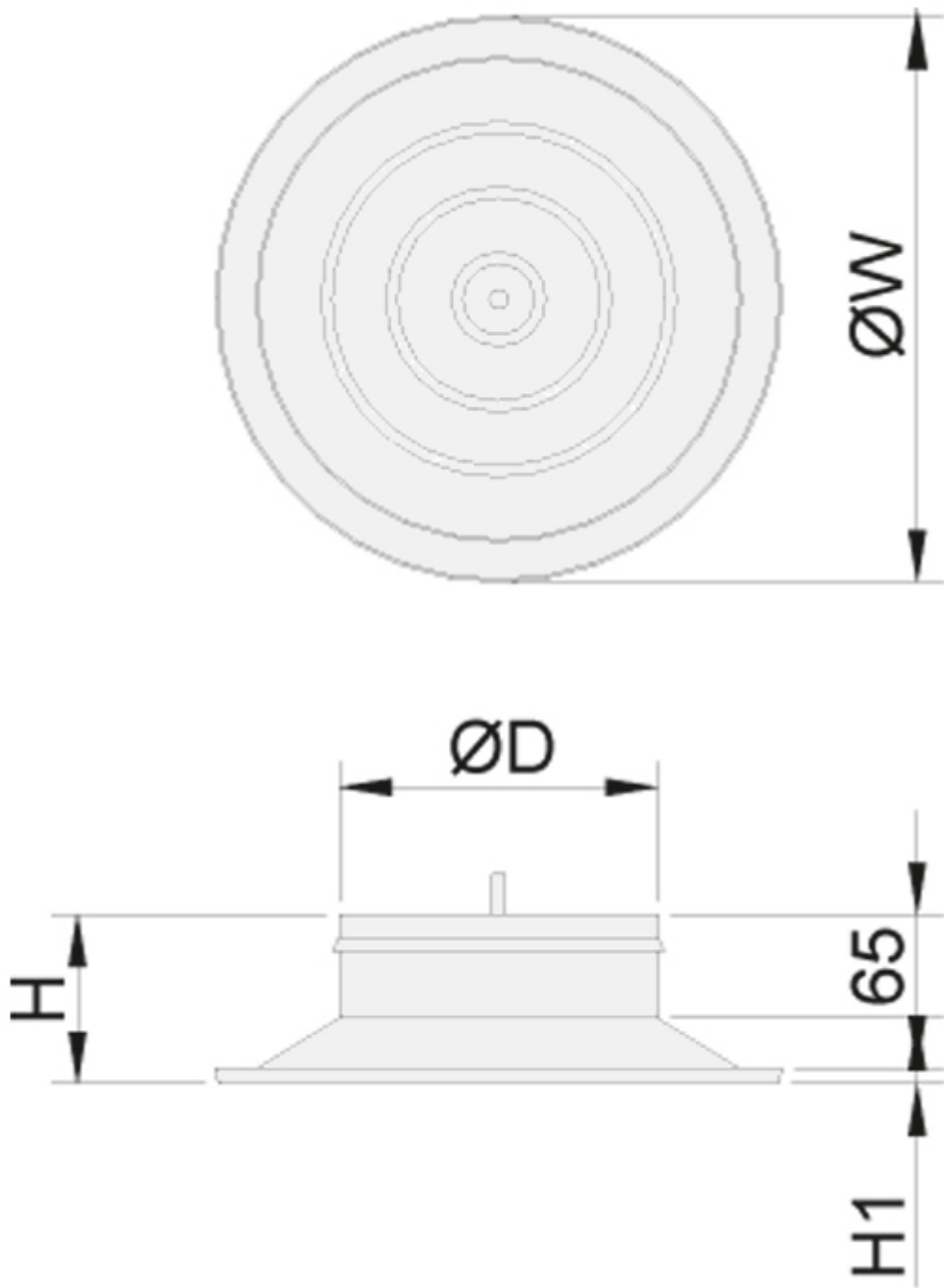


Fig.1. Halton TRB (radial jet)



# Dimensions and Weight



NS	ØW	H	H1	ØD
100	286	97	9	99
125	286	97	9	124
160	286	97	9	159
200	354	106	10	199
250	438	116	11	249
315	545	130	13	314
400	682	148	14	399
500	845	168	15	499
630	1055	195	16	629

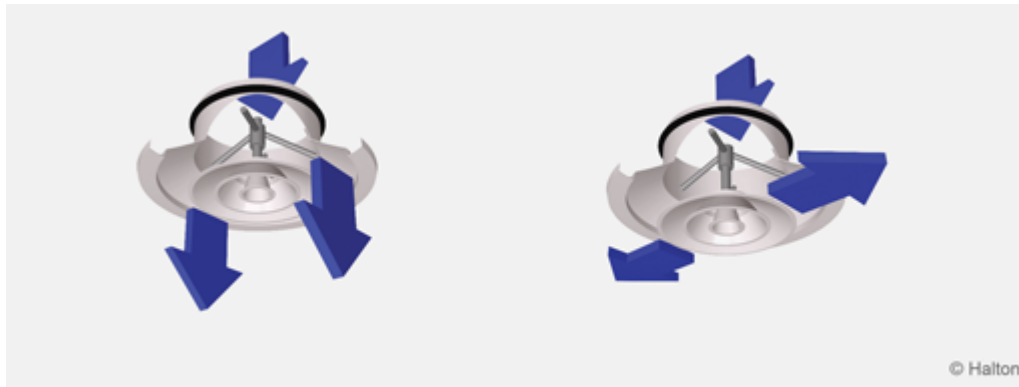
## Weight (kg)

NS	Weight
125	1.09
160	1.08
200	1.46
250	1.97
315	2.98
500	7.10
630	6.80

## Material

Part	Material	Note
Frame	Galvanised / Aluminium	Sizes 100 ... 500 / 630
Cone module	Galvanised / Aluminium	Sizes 100 ... 500 / 630
Finishing	Epoxy-painted / White (RAL 9003)	Special colours available

# Function



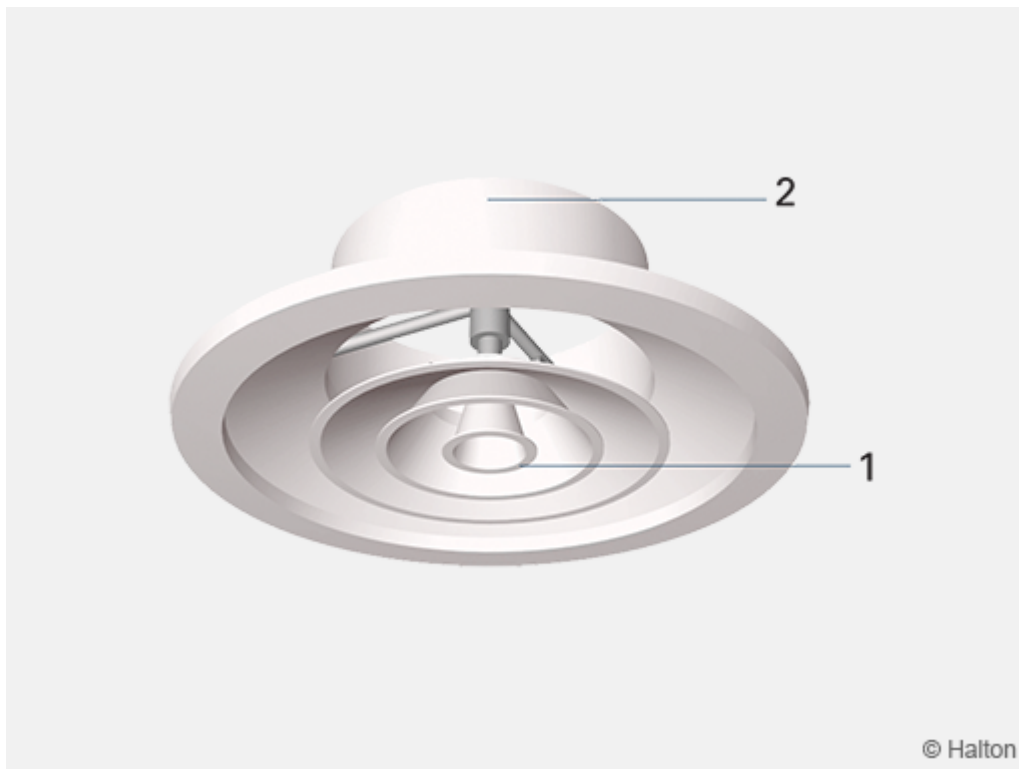
**Compact Jet**

**Radial Jet**

Halton TRB is a conical ceiling diffuser with an adjustable flow pattern. The horizontal radial jet is used mainly in cooling applications and the vertical compact jet with warm supply air in heating applications.

The supply air pattern is adjusted by rotating the cone module into the desired position. The recommended maximum temperature difference between supply air and room air in cooling applications is 10 °C.

# Installation



## Code description

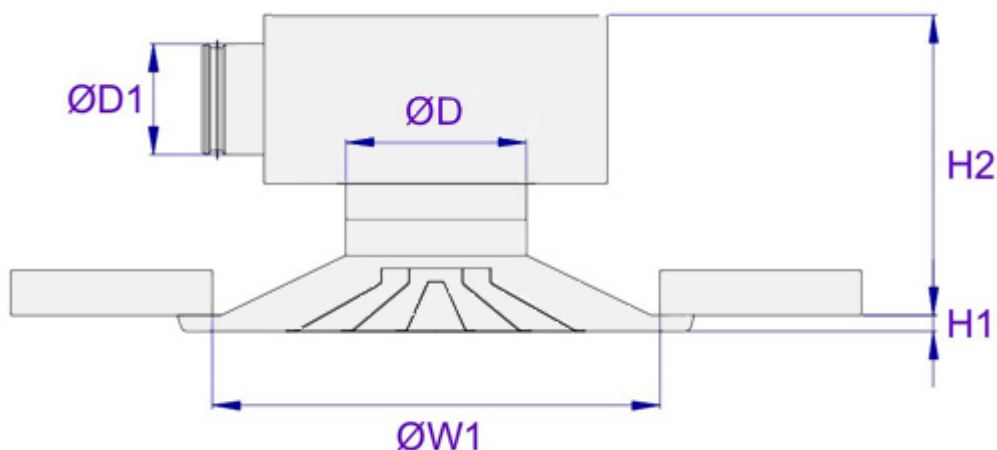
1. Cone module

## 2. Frame

The Halton TRB diffuser is connected either directly to duct by screwing or by riveting, or alternatively to the Halton TRI balancing plenum.

The minimum recommended safety distance upstream of the diffuser is  $3 \times D$ .

## Installation with Halton TRI



The collar of Halton TRI plenum can be installed either internally in the plenum or externally onto the bottom of the plenum. The height of the unit for the external installation is presented in the table below. When the collar is installed internally, the total height  $H2$  is reduced by 60 mm.

**Note:** The technical performance for the combination of supply air diffuser and plenum is presented separately for the two different installations.

ØD	ØD1	TRI	ØW1	H1	H2
100	100	TRI-100-100	244	9	242-282
125	100	TRI-100-125	244	9	242-282
125	160	TRI-125-125	244	9	272-312
160	125	TRI-125-160	244	9	272-312
160	160	TRI-160-160	244	9	312-352
200	160	TRI-160-200	306	10	312-352
200	200	TRI-200-200	306	10	371-411
250	200	TRI-200-250	384	11	380-420
250	250	TRI-250-250	384	11	444-484
315	250	TRI-250-315	482	13	455-495
315	315	TRI-315-315	482	13	500-550
400	315	TRI-315-400	617	14	518-558

## Adjustment

The technical performance has been defined for radial jet with cone module opening = 0 mm or for compact jet with opening = -15 mm.

The Halton TRB itself has no means for airflow adjustment.

In order to enable airflow adjustment and measurement of airflow rate it is recommended that the diffuser be connected to the Halton TRI balancing plenum of Halton TRH plenum box. The supply flow rate is determined by using the measurement and adjustment module MSM.

Detach the front panel or the whole diffuser and pass the tubes and control spindle through the cone module of the diffuser.  
Replace the cone module or diffuser.

Measure the differential pressure using a manometer. The airflow rate is calculated using the formula below.

$$q_v = k * \sqrt{\Delta p_m}$$

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved.  
Lock the damper position with a screw.  
Reassemble the tubes and spindle into the plenum.

**The k-factor for installations with different safety distances**

(D= duct diameter)

NS	> 8 x D	min 3 x D
100	6.0	7.5
125	9.9	12.6
160	16.9	21.9
200	28.3	31.0
250	47.9	51.5
315	78.6	–

## Servicing

Detach the cone module of the diffuser and clean the parts by wiping with a damp cloth.  
Reinstall the cone module.

## Specification

The ceiling diffuser has a steel (or aluminium) casing with an adjustable cone module and a spigot with integral gasket for connection to the circular duct.

The throw pattern of the diffuser is adjustable in radial or compact jet.

## Order code

### TRB-D; CO-ZT

**D = Connection size**

100, 125, 160, 200, 250, 315, 400, 500, 630

### Other options and accessories

**CO = Colour**

SW White (RAL 9003)

X Special colour

**ZT = Tailored product**

N No

Y Yes (ETO)



## Sub products

TRI Plenum (Diffusers)  
TRH Plenum (Ceiling diffusers)

## Code example

TRB-100, CO=SW, ZT=N

## References stored

### Diffusers stored

10000686	TRB-125,CO=W,ZT=N
10000687	TRB-160,CO=W,ZT=N
10000688	TRB-200,CO=W,ZT=N
10000689	TRB-250,CO=W,ZT=N
10000690	TRB-315,CO=W,ZT=N

### Accessories stored

10003697	TRI/N 125-125 + MSM
10003698	TRI/N 160-160 + MSM
10003699	TRI/N 250-250 + MSM
10003700	TRI/N 315-315 + MSM
10003702	TRI/N 200-200 + MSM